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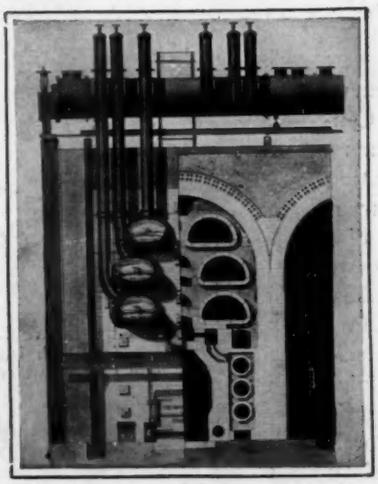

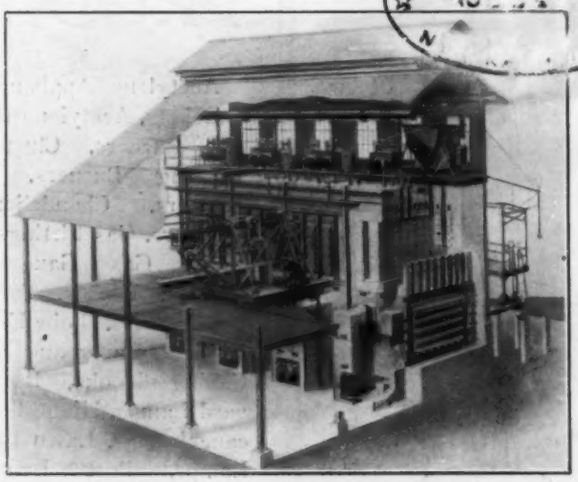

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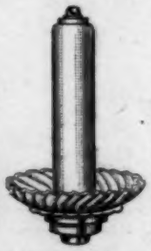

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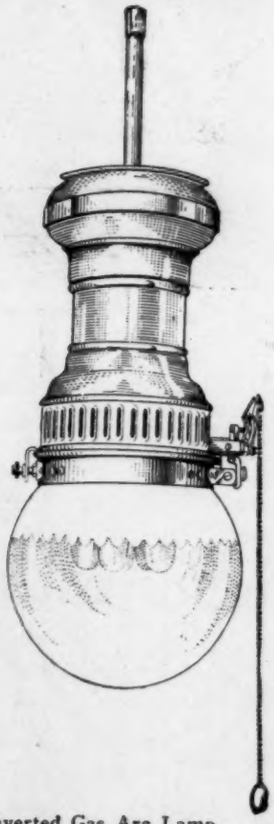

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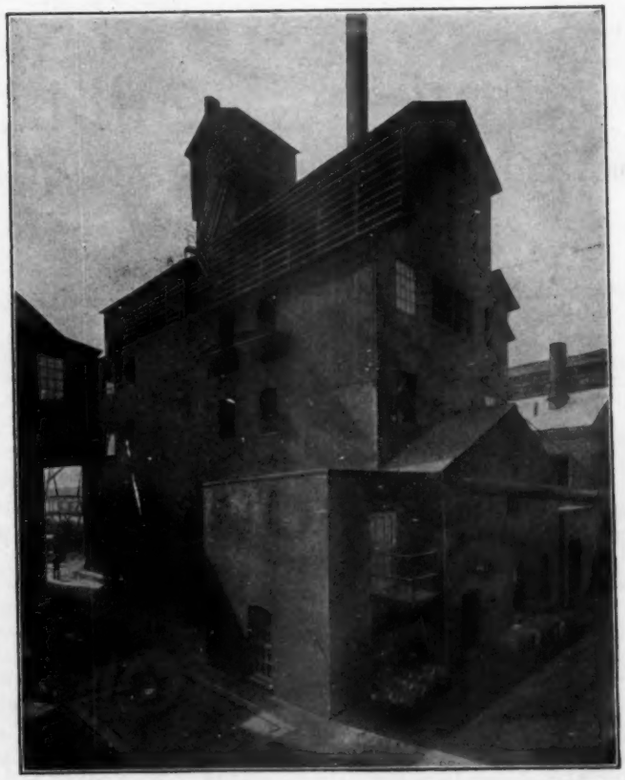

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SIXTY-SEVENTH YEAR

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AMERICAN
GAS JOURNAL

Established 1859—Pioneer of the Gas Industry

Vol. 125. No. 8. NEW YORK, AUGUST 21, 1926. Whole No. 3590.

Building the Showroom

How a small gas company has means at hand in selling

Jacob B. Jones

Treasurer, Bridgeton Gas Light Company, Bridgeton, N. J.

THERE is an old story batting around about a young lawyer who had but recently been admitted to practice, advising his first client, who was occupying a cell in the county jail.

The lawyer, with much assurance, told his client, "They can't put you in jail for that," whereupon the fellow in the cage shouted, "They can't; Hell, they have."

While this story is pretty old, to my mind it still has a modern application. We hear a lot about gas merchandising, and most of the reproductions in the journals of window displays and showrooms relate to the larger companies, while not so much is said about the self-named smaller companies.

I wonder sometimes if this is because the small companies say "It can't be done."

And for that reason this story is about a small company who would not admit that it could not be done.

Nothing Remarkable In Situation

There is nothing remarkable about their situation. They simply did what any company can do, if they are really anxious to sell gas merchandise and increase the sales of gas.

In this particular city they took the means at hand and put them to work. The gas plant is located on a small street, but fortunately only about 500 feet away from a very well-known and popular state highway. Among the plant structures was a fairly large building used as a warehouse and for general storage. A section of this building was paneled off with beaver board, and that was painted a glistening white—and kept that way. On one end of the building it was indicated in big letters that here was the show room of the gas company.

High Class Merchandise Displayed

The company selected a high class line of merchandise, and in this connection it offers their consumers only equipment that complies with the A. G. A. specifications, or such that has established a national reputation in the trade papers. There is not a single piece of equipment on the show room floor that was purchased as a "sympathy order."

When the show room was ready for business—and this is now some years ago—the company did not sit in its house by the side of the road and watch the race of men go by.

They tried to stop them—not the men so much as the women, and they did it with steady and consistent newspaper advertising. Using the A. G. A. service they carried liberal space in the two local daily newspapers, and being a small town, that did not hurt the company, either.

A Typical Small Town Condition

This little story is written around a small town operation. Every manager in a similar situation will recognize the fact that everybody knows everybody else, and pretty much all of their business. If we do not buy grape-fruit for two or three days they begin to say, "I wonder what is the matter with the Jones family, they don't have grape-fruit any more for breakfast; they must be slipping."

By the same token, all of your consumers know where the gas plant is. Admitting that your advertising has been carefully considered and granting that it has at least some pulling power, you are all set for Mrs. Consumer, who wants an enamel range just like the one her sister-in-law has. She comes to the office and states she is interested in a new range and can she see them. One of the girls greets

A Converted Warehouse Containing the Show Room

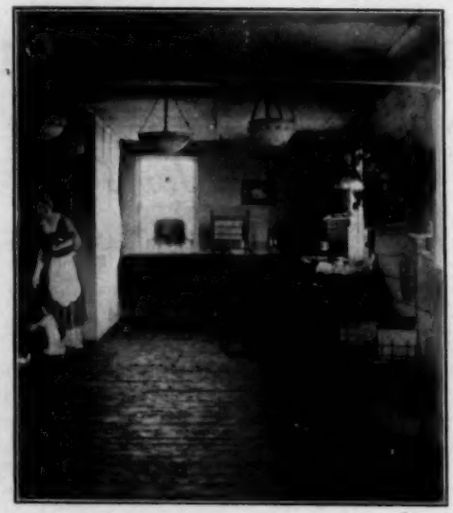
The Interior of the Show Room

her pleasantly and honestly, the three girls in this office act pleasant, and invites her to go over to the show room, explaining on the way that the company is showing several very attractive lines.

A Chance for Psychology

Here's where old Mr. Psychology enters and makes a profound gesture that makes the sales easy and certain.

The girl who is taking care of the prospective customer remarks that in buying a range or merchandise whatever from the gas company, the customer is assured of not only the guarantee of the manufacturer but back of that the reputation of the local gas company. And then, too, that the gas company, can sell better merchandise at less cost, because we have no heat, light, rent or selling expense to add on to the original cost to us.



Another View of the Interior

Now as to whether this company really does sell merchandise, that answer could probably be best had from the sales representatives who seek its account.

Some people doubt that Steve Brodie jumped off the Brooklyn Bridge, but the most of us still believe he did.

"It Can Be Done!"

USE OF GAS FOR HEATING HOMES WILL LIGHTEN DAD'S JOB ABOUT THE HOUSE

In addition to relieving the housewives of America of many tiresome and drudge-like duties, the gas companies are making life easier for the husbands and fathers of the country by ridding them of furnace tending and ash removal jobs, according to Alexander Forward, secretary-manager of the American Gas Association.

The use of modern gas-burning appliances has taken the dreary and Cinderella aspect of housekeeping out of the lives of American women. No longer do they slave over coal stoves in hot kitchens, for the modern gas range, with its oven heat regulator, has made cool kitchens possible and has practically automaticized cooking and baking. Modern gas-fired water heaters have taken the place of the reservoirs and tea kettles of the last century.

"The gas industry in the next ten years will do as much for the man about the house," says Mr. Forward. "Too long have men suffered the agonies of shoveling coal into the furnace only to shovel ashes out. Today gas house heating offers complete freedom from these duties, and indications point to a gradual turning to gas.

"Thousands of installations have been made in the last few years, and every indication points to universal adoption of this means of heating. Gas for house heating is a luxury, and many are pessimistic about its future. However, the automobile is also a luxury, and yet it is a most basic and sound industry today. The same applies to gas house heating.

"The American wife has learned to live properly. She knows that it doesn't pay to sweat and slave in the home. She demands and gets modern appliances. The house-man is just learning what he learned in business many years ago. The typewriter is a common machine today, and so is the telephone, and in a few years gas heating boilers will be accepted just the same as these conveniences are today.

"Recent investigations and tests have proved that gas can heat homes as cheaply as coal, if the homes are properly insulated. With the special house-heating rates now being offered by a growing number of gas companies and this insulation, I look forward to an almost universal adoption of gas as the means of heating homes."

New Methods of Gas Purification*

Details of sulphur recovery process

F. W. Sperr, Jr.

Director of Research, The Koppers Company, Pittsburgh, Pa.

IT is significant that the gas industry universally understands "Purification" to mean the elimination of sulphur from gas. In fact the common definition of the term is still narrower, being restricted to sulphur in the form of hydrogen sulphide. To the gas man, the term "purifier" means nothing more than an apparatus in which hydrogen sulphide is removed.

This common understanding is striking evidence of the recognized necessity that domestic gas must contain no hydrogen sulphide, and the experience of more than 100 years has established this necessity beyond all argument. The new methods to which this paper will be devoted, have the efficient removal of hydrogen sulphide as their prime objective. However, before passing to a discussion of these, it should be observed that there is some danger in accepting too narrow a definition of gas purification. The gas leaving the ordinary purifying system contains many substances which ought to be classed as impurities, in the sense that they cause trouble in the distribution system and sometimes annoyance to the consumer. Among such substances are hydrocyanic acid, carbon disulphide, naphthalene, resin forming substances, water and oxygen. Carbon dioxide might also be included, although this is more properly classed as an "inert" because if the other impurities were properly removed, ordinary amounts of carbon dioxide would be unobjectionable. Thus, a great deal of what is commonly regarded as "purified" gas cannot be regarded as pure. The gas industry must recognize the necessity for still more effective methods of purification, and cannot be satisfied until the commodity that it distributes is as free from irregularities of quality as the electric current.

Progress in Complete Purification

An important section of our research organization has been consistently devoted to the development of practical means for the complete purification of gas, using the term "purification" in its broadest sense. Much progress has been made and much still remains to be done. We are now able to obtain complete removal of hydrogen sulphide and hydrocyanic acid in a single operation, and the methods are such as to eliminate any need for adding oxygen to the gas, so that the oxygen impurity factor is reduced to a minimum. We have also developed improved means for the extraction of naphthalene, with which is also removed the bulk of any resin forming substances. Some progress has been made toward the elimination of carbon disulphide and research on the removal of moisture is in progress. At present writing, it appears entirely feasible to accomplish the removal of all objectionable impurities from gas at a cost only slightly higher than the present cost of removing hydrogen sulphide alone. The total apparatus required should occupy much less ground space than what is now required for hydrogen sulphide removal. The slightly higher cost of producing a pure gas would certainly be far more than compensated by saving in distribution costs and by improved service.

Liquid Purification

The apparatus usually installed for operation of the Seaboard Process consists of a tower having two main sections designated as the absorber and the actifier, together with air blowers, circulating pumps and othe minor auxiliary apparatus. The absorber and actifier are filled with suitable packing, e. g., coke, spiral tile, or wooden hurdles. The absorbing medium consists of a dilute solution of sodium carbonate (commercial soda ash) the ordinary strength of which is equivalent to from 1 to 3 per cent Na_2CO_3. This solution is pumped from a sump over the absorber, from which it flows by gravity into the actifier and thence back to the sump. The gas passes through the absorber in intimate contact with the solution, which removes from 85 per cent to 95 per cent of the hydrogen sulphide and hydrocyanic acid together with a smaller percentage of the carbon dioxide.

The solution containing the absorbed impurities flows down through the actifier through which air is blown by a fan. The volume of air required is from two to three times the volume of gas purified. The air removes the hydrogen sulphide and regenerates the solution so that it can be used over and over again. Some soda is used up in the formation of sodium thiosulphate and sodium thiocyanate and in mechanical losses, but the amount so consumed is very small. The usual consumption of sodium carbonate in the purification of coal gas is about 1 pound for every 8 pounds of hydrogen sulphide removed, some plants, however, showing much lower soda consumption figures than this. The sodium thiosulphate and sodium thiocyanate are extremely soluble and build up in the solution until their rate of formation is compensated by the rate of mechanical loss, after which the solution continues in practical equilibrium for almost indefinite periods. Periodical additions of soda and sometimes of water are required, but ordinarily no solution is discarded.

* Presented at the 1926 convention of the Canadian Gas Association.

The Sulphur Recovery Process

There are now two forms of the Sulphur Recovery Process. The basic principles of the first, which we use in coal gas purification, were developed by M. D. Mann, Jr., and R. B. Lebo, of the Standard Development Company. The second, which we employ in the purification of water gas and other gases containing substantially no hydrocyanic acid, was developed by the Pacific Gas and Electric Company under the direction of W. S. Yard, Vice-President. The patent rights of both of these developments are owned by The Koppers Company, which is responsible for a number of inventions covering the apparatus, operating methods and various modifications.

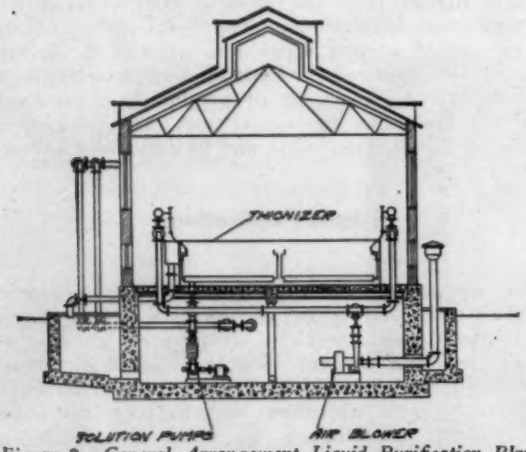


Figure 2.—General Arrangement Liquid Purification Plant, The Koppers Company's Sulphur Recovery Process.

Figure 2 shows a typical plant, as installed by The Koppers Company, for either form of the Sulphur Recovery Process. The apparatus includes an absorber, in which the gas is brought into contact with the circulating liquid, and a so-called "thionizer" in which the solution coming from the absorber is subjected to the action of finely atomized air which revivifies the purifying medium, liberates free sulphur and separates this free sulphur from the bulk of any other solid material suspended in the solution. Air is supplied to the thionizer by means of blowers, usually of the Roots or Connersville type. Air filters are provided to prevent dust from clogging the aeration apparatus. Other auxiliary equipment comprises circulating pumps for the purifying liquid, storage tanks, slurry pumps, sulphur filter and apparatus for adding the necessary chemicals to the system.

Reactions in the Sulphur Recovery Process

For the purpose of exemplifying the chemical reactions that are believed to occur in the sulphur recovery process, it will be assumed that the reacting ferric compound is ferric hydroxide ($Fe(OH)_3$). In the absorber, the primary reaction is between the hydrogen sulphide and sodium carbonate just as in the Seaboard process, viz.: $H_2S+Na_2CO_3=NaHS+NaHCO_3$. The sodium hydrosulphide reacts with ferric hydroxide in presence of sodium bicarbonate as follows:

$$3NaHS+3NaHCO_3+2FE(OH)_3=Fe_2S_3+3Na_2CO_3+6H_2O$$

There may also be some direct action between the hydrogen sulphide and the iron compound in suspension, viz.:

$$3H_2S+2Fe(OH)_3=Fe_2S_3+6H_2O$$

All of the hydrocyanic acid in the gas is converted into sodium thiocyanate (NaCNS). The primary reaction is

$$Na_2CO_3+2HCN=NaCN+NaHCO_3$$

NaCN reacts immediately with sulphur as follows:

$$NaCN+S=NaCNS$$

Whether this reaction occurs with the small amount of sulphur carried into the absorber from the thionizer or whether it occurs as an immediate consequence of the liberation of sulphur in the presence of NaCN in the oxidation phase of the process has not been investigated. It is known, however, that no hydrocyanic acid exists in the air over the thionizer.

The liquid flowing into the thionizer contains sodium carbonate, bicarbonate and thiocyanate, with possibly some unchanged sodium hydrosulphide in solution and ferric sulphide with any excess of non-reacting ferric hydroxide in suspension. It also contains in solution sodium thiosulphate formed in consequence of secondary reactions which will be discussed later. The sodium thiocyanate and thiosulphate are inert so far as subsequent reactions are concerned.

In the thionizer, oxidation of the ferric sulphide with regeneration of the ferric hydroxide and liberaction of free sulphur occur as follows:

$$2Fe_2S_3+3O_2+6H_2O=4Fe(OH)_3+6S$$

Absorption Apparatus

The absorber used in most of the sulphur recovery plants differs from that employed in the Seaboard process in that it is a combination of the hurdle type of gas washer with the saturator type familiar in ammonium sulphate manufacture. The saturator section constitutes the lower part of the tower. Here the gas enters and is distributed by a manifold into "cracker pipes," immersed in the liquid. The depth of the liquid through which the gas must pass is controlled by an adjustable seal in the outlet pipe and is ordinarily about six inches. A considerable reservoir is maintained in the saturator section so as to allow the reaction between the ferric compound and the sodium hydrosulphide to progress sufficiently before the liquid enters the thionizer. At some distance above the cracker pipe there is a conical steel shield constituting a division between the saturator section and the hurdle section. The hurdle section contains several banks of wooden

hurdles, the design of which has been improved over the usual construction so as to ensure more effective and uniform distribution of the liquid. The general design of the upper part of the tower, comprising sprays, distributing hurdles, and spray separators is the same as in the improved type of apparatus for the Seaboard process. The total height of the tower is usually about sixty feet.

Purpose of Saturator Section

The introduction of the saturator section in the absorber designed for the new process had for its principal purpose the elimination of difficulties due to tar that might be carried with the gas. It should be remembered that we are now dealing not with a clear solution, but with a liquid containing solid matter, e. g., iron compounds and a little free sulphur in suspension, and if any considerable amount of tar should be introduced into such a liquid, clogging of the hurdles might be anticipated. In the small scale apparatus used in the early development of the process, some trouble of this sort was actually encountered, the mixture of tar, sulphur and other solids building up on the walls of the absorber and clogging the hurdles. It was for this reason that the saturator section was designed. The conical shield protects the hurdles from direct action of the spray formed below, and at the same time carries the liquid from the hurdles over against the sides of the saturator section so as to keep these well washed down. In none of the plants, including the initial Seaboard demonstration plant which has been in operation for a year and a half, has there been the slightest indication of clogging in any part of the absorber. With any gas reasonably free from tar, the cracker pipes and shield could undoubtedly be omitted and an extra bank of hurdles substituted in the lower part of the tower.

Aeration Apparatus

The efficient regeneration of the purifying liquid and flotation of the sulphur require treatment with air, finely atomized by some means, so as to produce minute bubbles. The term "thionizer" has, for convenience, been invented to designate the apparatus in which such aeration is performed. The first means employed consisted of filtros or alundum plates or tubes through which compressed air was forced into the liquid. These gave trouble with clogging on account of the deposition of solid matter and possibly the crystallization of salts within the pores of the material, and to overcome this difficulty an ingenious device consisting of a cloth aerator tube was developed. The standard cloth tubes are five inches in diameter by nine feet six inches long. Each tube is mounted on a steel pipe perforated at intervals for distribution of the air, and this pipe, submerged in the liquid, is connected to an air manifold above the thionizer tank. This arrangement makes it possible to withdraw any one of the tubes for inspection without disturbing the operation of the tank. In most of the plants now operating there is a rigid connection between the aeration tube and the air manifold, but in new installations, an arrangement with a flexible connection is being substituted.

These cloth tubes have proven much less liable to stoppage than any rigid material, and if any stoppage occurs, it can be remedied by collapsing and inflating the tube several times by manipulation of the air valves or by rubbing the tube with a fork-like implement which has the effect of squeezing out the particles of solid matter. The tubes are made of a rugged grade of filter cloth which has given very gratifying service.

Each thionizer tank has several compartments arranged so that the solution may be transferred from any one compartment to another, and so that if the plant is running at less than capacity one or more compartments may be taken out of service. The depth of the liquid is about 42 inches. Each compartment has baffles directing the flow of solution. The space between each pair of baffles generally contains four aerating tubes parallel to the baffles. The arrangement is such that the solution flows longitudinally over the entire lot of tubes in series. The parallel flow arrangement has been tried, but has been found to give less satisfactory results. The thionizer compartments are also usually operated in series.

Cost of Sulphur Recovery Process

The installation cost of equipment for the sulphur recovery process, including catch boxes, is usually less than that of dry purification apparatus, the difference increasing with the size of the plant. The saving in ground area is remarkable. One large sulphur recovery plant now under construction occupies 25,000 square feet, two-thirds of which are required for catch boxes and oxide, while the same capacity in the form of dry purification equipment would require 100,000 square feet.

Estimates of operating cost for the treatment of 10,000,000 cubic feet of coal gas per 24 hours with a removal of 400 grains H_2S and 40 grains HCN per 100 cubic feet are shown in Table 1. The figures show that the cost of eliminating both hydrogen sulphide and hydrocyanic acid is about 1 cent per 1,000 cubic feet. It will be noted that the principal items for the operating cost are power, labor and soda, and the possible credit for sulphur. The cost of iron and incidental supplies (tubes, etc.) is insignificant.

Power Cost Saving

Some saving in the power cost may be anticipated through improvement of the aerating equipment. No definite prediction can now be made as to what may be accomplished in this respect with mechanical aerators, but an appreciable reduction of power requirements is anticipated.

The labor cost is especially important to the smaller plants. The same force of four men required for a plant of eight to ten million cubic feet daily capacity can operate a plant of twenty million cubic feet capacity. The labor cost in the smaller plants

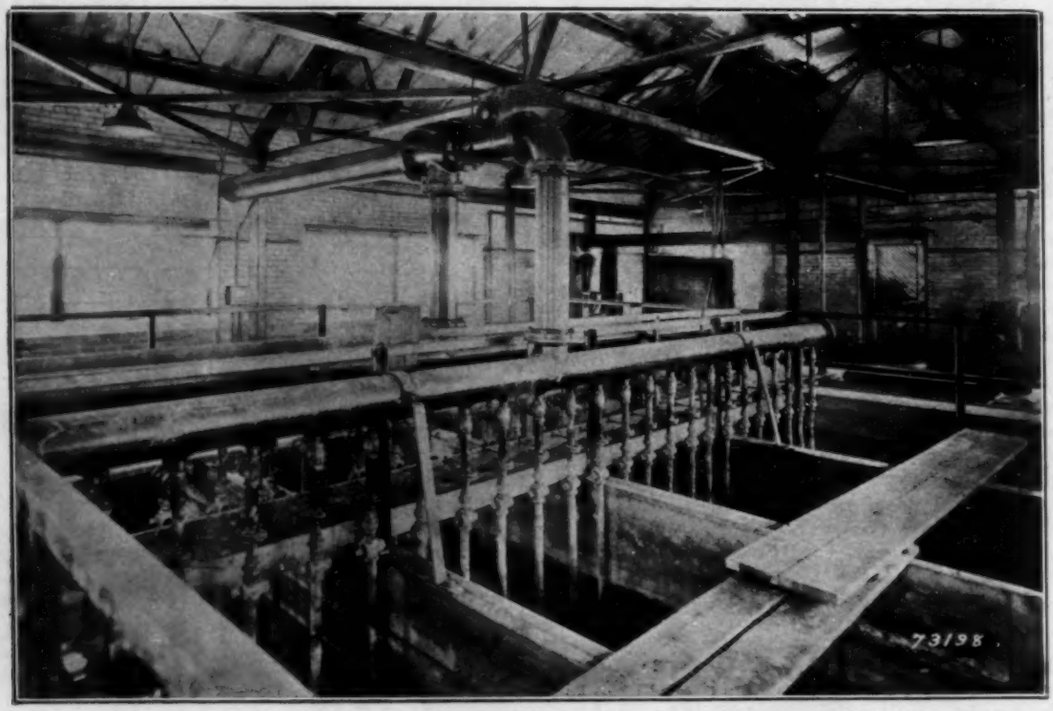
will depend upon the location of the apparatus. This should, if possible, be placed so that men from other departments can look after the apparatus in the afternoon and night shifts. In this way a small plant can operate with only one or two men in addition to the regular plant force. At the Madison plant, the operation is arranged so conveniently that no extra men are employed, the water gas machine helpers being able to give the purification apparatus all the necessary attention.

Disposal of Sulphur

The disposal of this sulphur at a good valuation so as to offset part of the operating costs of the new process is now one of our principal problems. Practically all of the sulphur used in America is marketed as brimstone which comes from the great native sulphur deposits of Texas and Louisiana and has a high degree of purity. The annual consumption in the United States amounts to more than 1,000,000 tons per year; while if all the sulphur contained in all the artificial gas distributed in the United States were recovered, it would amount to less than 10% of this. The present price of brimstone is $20 per ton. If this full price were obtainable for the recovered sulphur, the credit would average possibly 0.3 per cent per thousand cubic feet of coal gas. Under present conditions, such a credit cannot be expected, but there are certain special uses to which the properties of the recovered sulphur render it so well adapted that it may eventually command a price superior to that of brimstone. Finely divided sulphur whether in the form of pulverized brimstone, precipitated sulphur, or flowers-of-sulphur, always obtains a high premium and the physical fineness of the recovered sulphur is its outstanding characteristic.

There are a large number of special uses for finely divided sulphur, but its most important application is in agriculture. This applies particularly to the Western States, but the utility of sulphur should extend more and more to Eastern agriculture. It finds employment in the following ways:

1. It is directly applied as insecticide or fungicide, either in dry form or in emulsion. Large quantities are used for these purposes in California grape culture.



Sulphur Recovery Plant—Interior of Thionizer Building

2. It is employed as the essential constituent of lime-sulphur sprays and other materials in which it is applied in solution.

3. It is of great value in potato raising in which it is used to dust the seed potatoes before planting and also for soil treatment.

4. Remarkable results have been obtained with sulphur employed to counteract soil alkalinity. This promises to make sulphur an element of outstanding importance in Western agriculture where the control of soil alkalinity is an increasingly serious problem.

5. In combination with pulverized phosphate rock and with the aid of certain bacteria, elemental sulphur is capable of putting the phosphorus into a form available as plant food. It is possible in this way to eliminate the necessity of preliminary treat-

ment of the phosphate rock with sulphuric acid which is now done in the manufacture of superphosphate. Inoculation with a special bacteria is said to be necessary in most types of Eastern soil, but recent investigations indicate that special inoculation may not be necessary in many Western soils which are of alkaline character and which appear already to contain the necessary bacteria.

Other By-Products

Our organization is also doing a great deal of work in the direction of utilization of the sodium thiosulphate and sodium thiocyanate that constitute the other by-products of the process. It is realized that we have here a very efficient cyanogen recovery process. It is no difficult matter to prepare pure sodium thiocyanate from the solution accumulated in the process and it is chemically possible to prepare from this either sodium cyanide or sodium ferrocyanide. But a large number of other possibilities are also opened up through the attainment of a large and relatively inexpensive supply of sodium thiocyanate. It is also a comparatively simple matter to obtain sodium thiosulphate in a high degree of purity and there is already a large commercial demand for this material which is known to every amateur photographer as "hypo" and which finds application in a number of other arts besides photography. At present, it is to early to forecast the possibilities from the development of these other by-products and there is nothing as yet sufficiently tangible to warrant assigning a definite credit on their account against the cost of gas purification.

TABLE 1.
Cost of Gas Purification by Sulphur Recovery Process

10,000,000 cubic feet Coal Gas per 24 hours.
H^2S Removed, 400 Grains per 100 cubic feet.
HCN Removed, 40 Grains per 100 cubic feet.

	Per Day
Power for pumps, blowers, lighting, filtration, etc., 2,550 h.p.-hr. at 1 cent	$25.50
Soda, 0.35 lb. per M. cubic feet, at 1.5 cents	52.50
Iron Compound, 0.28 lb. per M. cubic feet, at $7.50 per ton	10.50
Labor, 4 mean at $5.00	20.00
Miscellaneous	6.00
Total	$114.50
Credit for recovered sulphur, 3,000 lbs., at ½ cent	15.00
Net cost per day	$99.50

Net cost per thousand cubic feet of gas—1.0 cent.

Boosting Sales Through Campaigns

Proves successful in water heater sale

J. E. Bullard

IT is an interesting fact that the gas company winning the Gas Sales Association of New England cup for the best tank water heater record last year, based on the percentage of water heaters to meters installed, made its record by conducting an intensive tank water heater campaign. It is still further interesting to know that the Hartford City Gas Light Company has been conducting tank water heater campaigns during the Spring for seven consecutive years and that the sales during these ten day drives have resulted quite uniformly in selling about a thousand heaters per campaign. In the neighborhood of half the tank water heaters sold in Hartford each year are sold during the ten day Spring drive.

During the period that the word campaign meant bringing in a crew of strange salesmen who covered the territory and perhaps used strong arm methods to make sales, the idea of a campaign tended to grow unpopular, but the gas companies of New England are finding that a campaign conducted without additional salesmen is a good idea. The best tank water heater records in this section of the country are due in very large measure to campaigns. There is reason to believe that the same idea will eventually be worked out to sell other appliances just as effectively. Apparently, however, at the present time tank water heaters stand out from other appliances as far as campaign results are concerned.

The Idea Is Simple

The idea as worked out in Hartford, Conn. is simple. It is merely applying department store methods to the sale of gas appliances. The campaign is staged for about the time in the Spring when people are beginning to think it would be a good plan to have some satisfactory way of heating the water when the fire in the boiler or furnace is no longer needed or the gas rather than the coal range will be used. A special price is placed on the heaters for a period of ten days. This year the heaters were reduced in price from $25.00 to $18.00 and the terms were $1.50 down and $1.50 per month. In just ten days 1051 heaters were sold or an average of slightly

over a hundred heaters a day. The first day showed sales of 173 heaters.

No additional salesmen are employed during the period of the sale. The regular force takes care of all selling. No additional men are employed in the shop department. The first heater sold is installed first and the others installed in rotation. The last purchaser has to wait until those who bought before him have had their heater installed before his is in service. This means a wait of perhaps two months.

Complaints Kept Down

Utilizing the regular forces in this manner has resulted in keeping down the complaints to almost nothing. The work is taken care of in the same way it would be if there had been no sale. The customer may wait, but a degree of haste, that is likely to result in installations that are unsatisfactory, and the adding of men lacking the required experience, which would also tend to result in complaints, are avoided.

Large space newspaper advertising with the copy changed every day and a special and effective window display are relied upon to attract the attention of the public. It has worked out in practice that more heaters can be sold in this manner than in any other. It would take a very large force of salesmen to cover the entire city in ten days, even if calls were made only at those homes where there is not a gas water heater. It would not be an easy task to train these men for their jobs and it would be a difficult matter to keep them well in hand during the sale.

Newspaper Advertising Aids

Through newspaper advertising, however, it is possible to reach all the people at practically the same time. The window display reaches at least most of those who come down town. All are reached with the sales appeal in exactly the same way. It is not a case of having one man tell one story and make certain promises while another tells another story and makes other promises. The same sales story goes into every home and since all the papers are used it is quite certain that the sales story actually does go into all the homes in the city.

This speed in getting the sales message over and the thoroughness of the selling through advertising apparently has a great deal to do with the success of the campaign. Just as department stores feature their bargains, the consumers are not left in the slightest doubt in regard to how much they will save if they buy during the sale. It is not so much a matter of featuring the good qualities of tank water heaters though these are not neglected as it is in driving home the point that purchases must be made at once if the money is to be saved.

Though a decided cut is made in the price, the volume of sales which results is worth it. A thousand tank water heaters sold in ten days means an immediate increase in gas consumption that is well worth while.

Regular Force Not Disorganized

Perhaps the best point about the whole plan is that it does not disorganize the regular force in the least. Everybody may work harder during the sale but no outside people are brought in and only those who are trained for the job work on it.

Each year the sale runs more smoothly than it did the year before. Each year also the number of water heaters sold totals within a comparatively small percentage of the total sold the year before. This sale in Hartford seems to have reached a stage where it is standardized. Everybody is ready for it, including the consumers and though a good many may wait for it, the fact that about as many heaters are sold during the remainder of the year as are sold during the sale indicates that the sale actually stimulates buying for the rest of the season.

This year 173 heaters were sold the first day and 22 of them installed. At the end of 21 working days 477 heaters had been installed. When the shop can concentrate its efforts on installing tank water heaters it is obvious that it can make more installations a day than would be possible if there was not this specializing for the time being.

It would seem that if campaigns on different appliances could be made as successful as the campaigns on tank water heaters have been made in this city, it would materially reduce the cost of selling and the cost of installing and at the same time greatly increase the number of appliances sold. An intensive drive concentrates the attention of the public and also enables specialization by the regular sales force and the shop department.

Method Applied Elsewhere

That the methods used in Hartford can be applied with success in other places has already been demonstrated. When the Eastern Service Company found that The Hartford City Gas Light Company was buying more tank water heaters for its size than other gas companies it began studying the methods used. It seemed a simple matter to adapt them to other cities and to apply them wherever the gas company would co-operate.

Last summer a sale was staged in Wakefield. Now the Wakefield company is the Municipal Light Department of the City. Gas men are usually of the opinion that a municipal plant cannot get very good results from sales efforts. As a matter of fact this company has very poor facilities for staging a sale. The display floor space is negligible. There are no show windows. No salesmen are employed. It would be hard to imagine more adverse conditions.

Yet as much of the Hartford idea as could be was applied. Mr. Ralph E. Daniels of the Eastern Service Company who had studied the methods in Hartford, helped Mr. Black of Wakefield stage the sale. The results to say the least were surprising. More than double the number of heaters it was thought possible by the Wakefield people to sell in the city were sold. When the figures for the year were totaled up it was found that based on a percentage basis per meter the best record of all companies reporting to the Gas Sales Association committee had been made.

In Hartford it has been proved that a tank water heater sale can be conducted year after year with no falling off in sales. There is no danger at all of reaching a saturation point. There is every reason

to believe that the Spring sale at Hartford can be repeated indefinitely, as it has been for the past years, and that the results will continue to prove as good. In Wakefield it has been shown that a ten day drive may open up sales possibilities that were not realized.

Other Appliances May Be Similarly Sold

Department stores could not long exist if they discontinued having special sales. There has to be something upon which to concentrate attention and get people into the stores. The thing that has proved the most effective thus far has been bargains. The gas company has four major appliances to sell. They are tank water heaters, gas ranges, automatic water heaters and room heaters. Each of these can be sold successfully by the Hartford plan of special ten day intensive sales. Where the sales effort has not in the past been especially strenuous the results ought to be at least double the number of appliances sold that have ever before been sold in a year. The annual total may be several times greater than it ever was before.

Salesmanship and Industrial Gas

Its function in developing business

A. G. Davis

SALESMANSHIP to any one not more or less intimately connected with it, is epitomized by the mental picture of a hale, hearty, well dressed man, apparently without a care in the world, who, in some queer, occult manner, usually persuades you to financially obligate yourself to pay for something that a wee small voice insistently whispers you don't need.

On the other hand, to the sales manager, to the salesman, and to the busy executive whose policies and actual personal success or failure are dependent on the steady and continuous outflow of manufactured products to the satisfied customer and consumer, salesmanship takes on other and less colorful aspects.

Summing up the general opinion—it is the hardest thing in the world. Our whole commercial and manufacturing fabric is built upon it and yet it is the one unknown quantity, the one uncertain factor that cannot be accurately estimated other than by an exceptional few who quite naturally gravitate to important positions, where, despite titles, despite apparent duties, their main object in life is the development, training and guiding of salesmen.

Good Salesmanship and Engineering Ability

In the development of the industrial gas business the problem is a doubly difficult one, for here, not only good salesmanship is required, but, in addition, a more or less comprehensive engineering knowledge and training are requisite. It has been demonstrated time and again to the writer and his superiors that a good salesman without other qualifying abilities, can do more harm in making one sale than a properly trained sales engineer can remedy in months and sometimes years. Sometimes the harm is almost beyond remedy, and the industry is dealt a blow from which it recovers slowly and with difficulty.

In the industrial gas field the mere getting of the order (so important in commercial life) is secondary to other factors. To properly determine the solution of a customer's problem is more important than selling an appliance that may or may not do the work intended for it. To then show and convince the customer that the solution proposed is the proper one, that the appliance suggested is the best suited to the purpose (even though, nine times out of ten, not the one the customer supposed), is more important than just getting by with an order.

Many may be able to determine the proper appliance or appliances, but how few possess the knack of presenting the matter properly to a busy executive whose engineers have perhaps recommended something else, and generally something else less expensive? Assuming that the matter is properly presented, how few know when to stop talking,—when to quite naturally assume the matter beyond further discussion and get the signature on the dotted line. An enthusiastic salesman so seldom knows when to stop talking.

Education Important

Our business is one of education. The sales engineer must be a teacher—a sincere and tactful teacher—or the business man may think of that old saying about trying to "teach a grandmother how to suck eggs."

Of what avail is all the engineering knowledge in the world if you cannot convince the busy and often impatient business man that his preconceived ideas are wrong? What matters it how much a man may know, how exhaustive his training, how many college degrees he may have, if he does not possess that jewel beyond price—the ability to impress a hard headed business man of his sincerity and ability to solve a given industrial problem?

After all that has been done, after the matter has been properly presented, explained in detail, objections met, advising engineers overridden or better still, convinced, the proper layout suggested, calculations proven, perhaps demonstration tests made, the great, yes, the greatest problem, is to then get the signature, and it is here that most men fail. Many fall by the way, but most fall in going over the top.

* Read at the 1926 meeting of the Canadian Gas Association.

Training Is Difficult

It is very hard to instill courage, initiative, and vim into the type of man suited for careful and painstaking problem solving, to carry him over this last difficulty. They so often fail—woefully fail. The operation is often a success, "but the patient dies" and the salesman doesn't get the order. Failure to secure an order is especially hard to bear because the customer in the first instance probably really wanted to purchase. Possibly he wanted to purchase the wrong appliance, and because of factors brought up by the industrial gas salesman relative to expense, decided to "put it off for a while." A salesman must have the stamina to dig right in at this point and "hammer", "hammer", "hammer", until the matter is properly closed, and by properly closed, I mean, closed with a signed order in his pocket.

The sales engineer's work is not yet complete, however. Again he must start on a hard and difficult road, that of properly installing the appliances, and later of getting them into proper production work, properly tested, and finally accepted.

Inspection of Installment Essential

A sale should never be considered as completed until the sales engineer, over his own signature, states that a proper final inspection has been made by him, that the installation is satisfactory to him, that the customer is satisfied, and lastly, the name and position of the person interviewed in this regard. This certification should then be filed away and the customer billed. The transaction then enters another phase, that of "Service"—a fit subject, in itself, for a separate paper. Sufficient to say that the efficient sales engineer never really loses sight of the gas consuming appliances which he sells. As a result of this policy, business will increase, and what is decidedly more important, the number of satisfied industrial consumers and friends of the company will increase.

Aid Given by Prestige

It is important that company executives should appreciate the great help given to the industrial sales engineer by that giant—company prestige. Hopeless is the labor of the industrial sales engineer whose company is not trusted or respected—whose past dealings have developed a resentful and distrustful public. Compare that man's task with that of the sales engineer of another company whose customers seldom make a move regarding a heating problem without consulting their friends of the industrial department of the local gas company, and whose recommendations are looked upon as final and (what is more important) as disinterested beyond a proper desire to install the best equipment.

This one powerful weapon of salesmanship is in the hands of the company executives—they must develop it to the utmost. How this may best be done is beyond the scope of this paper. Prestige—that intangible, powerful friend in need, is a big factor underlying the success or failure of most company projects for the development of industrial business.

Potent in Closing Sales

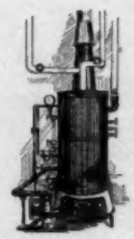
When the writer was actually selling industrial appliances, he was indebted more to company prestige in closing sales than to any other single factor. Many times the fact that "the gas company" had said they could and would do a given thing has had more influence than all the arguments, facts, data, proof or figures the salesman could supply. A salesman of such a company becomes proud of it, and shows that he is proud of it, all of which cannot fail to have its effect upon the customer, and directly upon the general public.

It is a fact very generally recognized, that the attitude of mind of a salesman has an important influence upon the volume of his sales. If he is proud of his position, of his superiors, of his company, it is axiomatic that he will reflect and radiate this in all his business contracts and these factors will have a direct bearing on his volume of sales

(Continued on page 176)

GAS - The Silent Partner in Industry

Boiling and Steaming



"Live In and Expand Your Business in Greater Pittsburgh"

Reproduced from the Pittsburgh Post of June 28, 1926

STEAM and hot water are used as the heating media for many commercial purposes. For boiling or steaming of food products, for vulcanizing, for the manufacture of chemicals, for curing lumber and many hundreds of other operations—gas is the ideal fuel for supplying the necessary heat through the indirect media of steam or hot water.

Gas possesses the three requirements most necessary for perfect heating. It lends itself to automatic regulation for temperature control; it provides a ready means of speeding up production through its unlimited heating capacity and quick response; and it is the means of obtaining the final product at lowest cost.

Gas is applicable to all other industries requiring a clean, economical, and controllable heat.

The engineers of this company are always available for consultation on any industrial heating operation, and this service is, of course, given without charge.

Equitable Gas Company

Advertising Gas For Industrial Purposes.

The Industrial Market Is Here

E. D. Brewer commends Mr. Clark's Article

AS a loyal Gas Man I have just read with unbounded interest in the August 7th issue of the American Gas Journal Mr. Horace H. Clark's splendid article entitled, "The Goal of the Gas Industry."

Every gas man in the United States should read and re-read this wonderfully inspiring speech.

Mr Clark is right. "The Industrial Market is Here," and there is conclusive evidence at hand to show that many recognized leaders in the gas business appreciate this.

Witness in the same issue of your valuable paper where a pioneer manufacturer of well-established reputation has opened the finest gas appliance showroom in the world, and one that will equal the best in any industry, in New York City within a stone's throw of Forty-second and Broadway. It is hardly necesary to say that the new de luxe showroom in little ole New York has been a factor in increased business. Especially has it influenced multi-coil installations for large users of hot water. More of this manufacturer's multi-coil automatic storage systems are being sold in New York today than ever before in history, and this serves to remind us that this desirable business is within reach of all who will reach. Every real Gas Man knows that heating water with gas is the one big hope of the gas companies. We go so far as to say that any man in the gas business who does not subscribe to patent fact does not belong in the industry and should try his hand in some other line.

Gas In Baking

Again Mr. Clark writes of furnishing the fuel for the bakery that is to supply the community with bread, and we would like to add here that the bakery supplies not only the gas-served population but also many little cities and towns within a radius of 50 miles or more. A man does not have to live on a city street to eat bread cooked with gas. In this day of quick transportation, and good roads, he can live miles out in the country and still have perfect bread cooked in the big gas-fired ovens in the city, and delivered at his door.

For example, take Augusta, Georgia, one of the medium size cities of the South, the Gas Company here being under the magic wand of that general genius, Walter Whetstone who is President of the Southern Gas and Power Company.

Here we have a gas-fired bakery that supplies Augusta with a great deal of the bread eaten there, and likewise the people in the roads, and towns for miles around.

We are sending you a picture of the gas-fired oven, and also a drawing illustrating our point of surrounding towns not having city gas, but enjoying bread cooked with city gas, the city being Augusta, Georgia.

Yours very truly,

E. D. BREWER,
District Manager, Ruud Mfg. Company.

The Story of the B. T. U.

The B. T. U. imp explains himself to the City Man

This is the title of a most interesting little booklet, issued under the auspices of the New England Bureau of Public Service, and containing a story of heat. It is written in a conversational form, as carried out between a City Man who was camping out, and an elfin creature representing the B. T. U. Although the story is written in a lighter vein, nevertheless, it tells truths that are as clearly represented and discussed as in the solemn treatise. The booklet is especially intended for the average gas company customer, to teach him just what heat means, and just how heat in gas is converted into useful purposes in the range or other gas appliances.

We publish below an excerpt from this booklet which shows better than anything else just what information it gives and how it tells it.

"Go right ahead."

Out came the little whistle again and at its summons, a drove of little figures appeared again. This time their leader spoke a few words and immediately they all began to move in unison. First they grouped themselves in a symmetrical figure, all with their little hands raised above their heads, then others climbed on the shoulders of the first ones, and a few on top of them, all with hands up-stretched. Then at a word from their leader they all began to shake their hands until the whole structure shimmered as though it was alive.

The City Man watched intently. Suddenly, just as they began to shake their hands, he turned to B. T. U.

"Why," he exclaimed, "I know just what it looks like."

"Yes?" prompted B. T. U.

"It reminds me exactly of a gas flame, burning. Like the flame in my water heater at home."

B. T. U. clapped his hands in delight. "Good!", he exclaimed. "That's just what a gas flame is. Just what the gas flame consists of on your stove, in your water heater, in your mantle light or anywhere you use gas. That's the useful thing that you pay for in the gas you buy. That—"

"But," interrupted the City Man, "I thought we paid so much a cubic foot?"

"You do," answered B. T. U., "and it's that very thing that leads to mistakes. Suppose," he went on, "that I came up to you and said I'd paid a dollar for a gallon, what'd you say?"

"Why," answered the City Man at once, "I'd ask a gallon of what?"

"Sure you would. And suppose I answered by saying a gallon of liquid?"

"I wouldn't know any more than I did before," admitted the City Man.

(Continued on page 172)

GAS MERCHANDISING

Domestic – Industrial

Ideas for the Man Who Sells

William H. Matlack

LOCAL INTEREST IN ADVERTISING

THE Illinois Power and Light Corporation is employing headlines in their newspaper advertising that tie into local current events. The advertisement reproduced on this page is one used by the company to tie in their June gas range sale with the racing at Fairmont and the Derby Day at that track on the day before the Derby ball sponsored by the East St. Louis Junior Chamber of Commerce. Other recent advertisement headings dwelt on the "Vacation" season, "Independence" day and "Summer Freedom" through the use of the modern gas range equipped with an oven heat regulator. Current events always secure attention, especially when they are of a local nature and the Illinois company says the results in the way of direct sales from the advertisements are very satisfactory.

They are off!
Those home managers who own a Modern Gas Range equipped with a Lorain Oven Heat Regulator have an afternoon off every day.
You, Too, May Enjoy the Races
and Kitchen Freedom—if you have a LORAIN Equipped Quick-Meal Gas Range in your home.
THERE is no better time than Right Now for you to buy a LORAIN-Equipped Quick Meal Gas Range, and free yourself from pot-watching in an overheated kitchen.
You can now purchase one of those renowned gas ranges at a new low price, on easy terms payable monthly with your gas bill.
No. 5316 illustrated may be purchased for only
$75.15
Only $3.15 Down
Less $15 for Your Old Stove or a Whole Meal Aluminum Cooking Set Free as a Premium.
No. 5016 Quick Meal Gas Range Equipped with LORAIN Oven Heat Regulator
QUICK MEAL
You Owe it to Yourself to Investigate
this wonderful invention that has enabled countless women to have more time to devote to the other departments of their homes, to their children, to recreation, to cultural pursuits—for the use of time and temperature cooking—whole meals may be cooked without watching or worrying. There is a style and size to fit any kitchen.
Phone for Our Representative or Call at Our Store
Phone Bridge 1041
Illinois Power and Light Corporation
414 Missouri Ave.
YOUR GAS CO.
L11A

GIVE SOME THOUGHT TO FALL WINDOWS

WHILE you are away from home on your vacation this summer take a note book with you and jot down somes notes regarding the different windows you see in the resorts you visit.

Look them all over and you will get some ideas that will help you work out unusual window trims

when you return home and get into action for fall business. The window is the place for you to expose your merchandise to best advantage and it is entitled to a lot of thought and planning. The gas companies in the larger cities are now spending thousands of dollars to work out effective window display, and they are reporting that they are productive in a big way.

As The Journal Views It

COMPLAINTS—THEIR VALUE

The gas man has a number of different ways of looking at complaints. It all depends on his local conditions and in general of his real understanding of complaints and exactly what they should mean to him. It may be said that the average companies would consider themselves exceedingly fortunate to have no complaints at all. In other words, complaints are looked upon as real nuisances and as evidences of bad feeling amongst the customers.

However, on careful analysis and study of complaints, their sources and their real significance, it will be realized that complaints are not so bad after all. There is no question but that it is impossible for anybody, either an individual or a corporation, to satisfy all who have any dealings with them. There will always be someone who will not be perfectly pleased with the service that he or she is given and there is always a chance that some mistake will be made by an employee or that something will go wrong which will bring about a state of dissatisfaction on the part of a customer. This is not peculiar to the gas industry at all, but is a condition that exists in all lines of human endeavor.

Therefore, complaints are always to be expected and when they are made and are of reasonable character, they indicate a certain interest on the part of the customer in the gas company, rather than a feeling of unfriendliness. Of course there are various kinds of complaints and not all of them can come under this category, but it is safe to say that the company that receives no complaints at all is not so much the one that is giving perfect service, for that is impossible, but rather the one whose customers are completely disinterested in their company and in the service they receive. The progressive company, that is making experiments and is selling gas practically everywhere that it can be used, is the one that is receiving complaints. For it is making mistakes, which is to be expected and not at all to be condemned. From these complaints it finds out just what is wrong, and then it proceeds to remedy the defects. In this way it builds good-will and advances the cause of gas. If a customer has a bad range that consumes a lot of gas, for some reason or other, and is not interested enough to make the complaint to the gas company but tells her troubles to her neighbors and condemns unequivocably gas and everything associated with gas, the condition is a very bad one. Of course the gas office does not get the complaint, but it is easy to see that it is far better to have such a complaint from the dissatisfied customer. For nine times out of ten it is always possible to adjust this complaint and satisfy the customer and make a real friend.

Thus, complaints are not to be feared at all but are to be expected as a part of the daily routine. The danger lies by no means in the complaint but in the manner in which they are handled. This requires great tact and real understanding on the part of the complaint clerk and his company. It means a thorough appreciation of the real value of complaints and of how they can be turned to the advantage of the gas company. When complaints are handled in this manner, they will be found to be avenues of approach to the customer, not nuisances and disagreeable occurrences, but real opportunities to make true friends for the gas company.

GAS AND FUEL COMPETITION

The theory of the public utility business has been that, inasmuch as it constitutes a monopoly, it should be regulated and controlled in some way by governmental authority. This fundamental conception has been applied to all public utilities and to gas as well. The result has been that we have been accustomed to consider gas as a monopolized business, meaning that gas as a fuel, or as a lighting medium in the past, had no competition. This was true to a certain point, but as we well know, there was at one time considerable competition between electricity and gas for the lighting load. Before the advent of electricity, it is true that gas had a monopoly in this field.

At the present time, careful students of the economics of public utilities, and particularly of the gas utility, have come to the conclusion that gas is no longer by any means a monopoly and not only that, but that it should not desire to be so, except in a special sense of the word. By this we mean that gas does not monopolize the heating field because there

is no competition between it and other fuels. But we gas men are all confident that eventually gas will monopolize the heating field, solely for the reason that it is the best and most economical of all fuels that can be used for this purpose. Such a position is in truth a monopolized condition which comes not from stifling competition or from lack of all competition, but from the ability to overcome rivals because of intrinsic superiority. Such a monopoly is to be desired, for it is a monopoly because the buyers choose to make it so.

Thus, gas today may be considered in every sense of the word to be in competition with other fuels in the field in which it operates. We know that it competes with oil, coke and coal as well as electricity, in the industrial field. In the house heating field, we find gas very often competing with oil. Even in the domestic field where gas enjoys extensive and almost universal use, because of its superior properties, there is a certain amount of competition between it and oil and electricity.

We have all heard the claim that competition is the life of trade. People, as a whole, are opposed to monopolies. They do not like to be told that they may buy a certain commodity at a certain price or not at all. But society welcomes the man or industry, who can achieve a monopolistic position, due to the fact that he or it can do something better than any other person or industry. This is the kind of monopoly that the gas industry is striving to become, and, when it does reach the point, where it has become the low cost producer in the field and has convinced all who use heat that its product is the one that gives the best results at the least expenditure, then it will have reached the goal that it has set for itself and will have become the universal fuel of industry and the home.

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THE STORY OF THE B. T. U.

(Continued from page 169)

"No, you wouldn't. And a cubic foot of gas means just as little. But," continued B. T. U., "if I said I'd paid a dollar for a cubic foot of gas which had 500 B. T. U.'s in it, or in other words, that had a calorific power of 500, it would mean something, wouldn't it? It'd give you an idea of the value of the thing I'd bought. You see?"

"Yes," agreed the City Man. "I see what you mean. But," he added after a minute, "then the more B. T. U.'s there were in that cubic foot of gas that I bought the more value I'd get for my money, wouldn't I?"

"No."

"But you said that the B. T. U.'s were the things that worked in the gas. If that's so, then—"

"But that doesn't mean that the more of us you jam in a cubic foot of gas the more work you'll get," interrupted B. T. U. "Let me show you."

He got the City Man to bring an iron pot from the cabin and prop it up on sticks so that there was a clear space under it. After it was filled with water, he blew his little whistle again. When the B. T. U.'s answered he grouped some of them under the pot like the gas flame that the City Man had recognized before. They stood on the ground under the pot and at their topmost layer, the hands of those nearest the pot just grazed its under side. Then B. T. U. blew his whistle and they all began to shake their hands.

"Watch the water," commanded B. T. U., and the City Man did.

Soon it began to simmer and then boil, the steam rising from its surface.

"Now," said the B. T. U., "we'll say that those B. T. U.'s represent just one cubic foot of gas. It boils the water all right, doesn't it?"

"Yes," agreed the City Man.

"Now, we'll see what would happen if we jammed a lot more of us into that cubic foot," said the B. T. U.

At his signal, more of the little figures began to climb and haul themselves up on the group under the pot until they quite covered its bottom. Those who couldn't find room underneath began to cling to the sides of the pot until it was all covered and there was a fringe of them all the way around its edge. As soon as they got in position they all began to shake their hands like the first ones.

"What's the water doing now?" asked the B. T. U.

"Why," answered the City Man, "just boiling like it was before."

"Exactly," replied B. T. U. "And all those other little relations of mine that you see hanging onto the rest and all those clinging to the sides of the pot and standing on its edge are all wasted. Every one of them. Of course," went on B. T. U., "this is only an example, but it holds true in other things besides boiling water. You understand what I mean?"

"Yes, I think I do," the City Man replied. "And what's more," he added, "you've told me a lot of things that I never knew before, besides getting me a warm bath. I'm certainly grateful, and only wish I could do something to repay you."

"Oh, don't mention it," replied B. T. U. "If everyone who used gas only understood us better," he went on, "it'd make everything much easier for everyone. And you don't have to thank me. I'm glad to show you anything I can. And so far repaying me," he added, "well, if you want to so much, you can very easily."

"How?", asked the City Man.

"Why by simply telling your friends all about me and explaining what I can do and how I do it and convincing them it's true. And," he added, "you might also show them how too much of me jammed into anything can be just as bad as too few of me or even of none at all."

"I certainly will," replied the City Man and held out his hand to say good-bye.

But there was the sound of a shrill little whistle and all at once the smiling face of the little B. T. U. disappeared with all of his little followers, leaving the City Man standing alone.

But now there was a contented smile on his face.

COOKING LESSONS BY RADIO

MANY gas companies are taking advantage of the radio to teach their customers to cook with gas. By furnishing a menu and recipes two or three days each week, they find that a great many new faces appear at the home service meetings held at their store. The Laclede Gas Light Co., St. Louis, is a pioneer in radio broadcasting and they

One Cup flour
One tablespoon butter-
Now---
Cook by Radio!
What will they do next? Here's KMOX ready to come right into your kitchen, and help you plan zestful dishes for that family of yours.
Today and every Friday at 11:15 A. M., Miss Elly Baack, editor of the Globe-Democrat's 49th State Food News, will broadcast interesting ideas direct to you.
Tune in for new and practical menus.

are very highly pleased with the results they have obtained from this type of sales promotion. The Laclede Company broadcasts daily at about 10 o'clock in the morning. The work done buy this company has induced others to take it up. The St. Louis Globe Democrat, a morning newspaper, conducts a radio class each Friday to which folks in the 49th state have responded wonderfully. This class is conducted by Miss Elly Baack, Editor of the Globe Democrat's 49th State Food News, a section devoted to home economics published by the newspaper once each week. Broadcasting recipes and hints to home managers prove popular even in the torrid days of summer in the Middle West and when cooler days arrive the class membership runs into thousands. Promote better cooking and the per meter sales will increase, as will the sale of modern cooking appliances.

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ACQUAINTANCE WITH GAS RANGE RECOMMENDED FOR AMERICAN GIRL OF TODAY

THE American girl of today is running serious risks of contracting disease by starving herself in her frantic efforts to grow or remain thin, according to the home service directors of many gas companies.

"Lamb chops and pineapple may be stepping stones to the boyish figure every woman's heart desires," say the directors, "but anybody who diets rigorously is flirting with nervous breakdowns and other complaints that are caused by the lack of proper nourishment.

"Nearly everyone can appreciate the desire to be thin, especially since today's fashions are for slender people, and most men seem to have placed the 'stylish stout' in the discard. However, why do our girls starve themselves of the food they need in the effort to please their boy friends?

"Exercise is important, of course, but proper, well-cooked foods are even more essential. When the American 'flapper' becomes fully informed about the merits of foods and has more than a nodding acquaintance with the gas stove in the kitchen, she will find the true way to slenderness and health."

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TO MAKE GAS USE A PLEASURE

"THE Home Service Department of the Hyde Park Gas Company, of Scranton, Pa.," according to Ellen Brooks McCleary, Director, "was established with the thought of making the use of gas a pleasure. Before our foreign-born patron can use gas happily, her inborn fear of the unfamiliar must be destroyed.

"The American woman has been sold, but here in Scranton our problem is to convince our great foreign population that gas can be used safely as well as efficiently.

"We take our service into the home as soon as a gas range is installed, and I call and see that the installation has been satisfactory, and assure myself that those who will use the gas equipment thoroughly understand all the details, including the way to read the meter. There's no happiness for the thrifty woman in using gas while the reading of the meter is a mystery. A lesson in psychology teaching the woman to conscientiously register mentally 'I am

turning off the gas' takes away the uncertainty that is a bugaboo to some women. In addition to this sales follow-up, we have a Home Service Kitchen on our third floor, where weekly lessons in cookery are given, over 4,000 women attending the first year.

Types of Cookery Demonstrated

"An earnest effort has been made to demonstrate the types of cookery of special interest to different classes. When our recipes were changed from cream puffs and dainty desserts there was a noticeable change in the audiences. The younger women are most interested in the unusual, while the white-haired mother of the family finds more substantial dishes to her liking.

"Housewives are generally awakening to the dire necessity of a knowledge of food values and we have stressed the importance of balancing meals and cooking foods as to retain their nutriment.

"It is astonishing to go into local groceries and see the amount of ready-made cake disposed of daily, as miners and bucket men surely like cake. It is our ambition to cut down the sale of ready-made cake by teaching how to bake better cakes at home in an ideal oven.

"The appreciation of the interest of the gas company with the housewives' personal problems, which our consumers so universally show, proves that the Home Service Department is making friends."

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HOME SERVICE IN UTAH

THE Utah Valley Gas and Coke Company, through its local manager at Provo, Utah, Walter Adams, writes us the following in regard to the workings of the Home Service Department of that company:

"For a number of years we conducted public cooking schools for a period of three months during the summer season, and then later established a policy of conducting periodic public demonstrations and supplementing these with home service by a competent domestic science demonstrator.

"During the last two years we have maintained a continuous service for a period of three months during which we staged three days' work each week in our sales room and offered home service two days each week for the benefit of our patrons.

Individual Home Service

"We are at present doing nothing in the home service department except to supply individual home service by our demostrator on call.

"In our territory comprising three small towns with populations running from 4,000 to 15,000 and with a total of slightly more than 2,000 domestic customers, we confess a certain degree of disappointment with the response of our patrons and prospects to our efforts.

Rendering Service Main Idea

"We have conducted our home service work with a view solely to rendering service. While accompanying these demonstrations, whether on our sales floor or in public halls with displays of gas appliances, we have never made any direct effort at soliciting business. Our thought has been, and from our experience still is, that the home service work, while it is intended for both service and new business development, would best serve its purpose by avoiding any direct selling effort.

"We hope with the experience we have had to eventually work out some satisfactory home service that will justify the maintenance of a permanent department, whether on full time or part time."

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ROYALTY ENGAGES IN HOME SERVICE

WORD comes from Sweden that, while the Crown Prince is visiting us, two of his sisters, the Princess Martha and the Princess Astrid, are enrolled in the housekeeping school in Stockholm. Pictures have been received showing them learning about culinary matters at a modern gas range. Modern civilization has not made it possible for us all to be the sons and daughters of a king, but it has made it possible for the daughters of a king to have the same conveniences that we have.

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School Days Again!

Start them right with a *Hot Cereal* for breakfast

Every mother knows that cereals are body builders, energy sustainers, the best food on which to study, play and grow. A hot cereal is still better because it warms up the young engine for the day's activity. See that your boys and girls have a bowl of hot cereal every morning this Fall and Winter. Here are ways to make this breakfast especially appetizing.

For a change try—

Cracked Wheat and Dates

1 cup of cracked wheat
5 cups of boiling water
¾ teaspoon salt
½ cup dates. (Figs, raisins or prunes may also be used.)

Stir wheat into rapidly boiling salted water, stirring constantly; boil 5 minutes. Cook in double boiler over midget burner for 5 hours, adding chopped fruit last half hour of steaming. It is a practical plan to partially cook this cereal the evening before while you are getting dinner, then put it on the stove in the morning and add the fruit.

Oatmeal with Apples

Cook oatmeal the evening before this dish is to be served. Core apples, leaving large cavities; pare, and cook until soft in syrup made by boiling sugar and water together allowing one cup sugar to one and one-half cups water. Fill cavities with hot oatmeal; serve with sugar and cream. The syrup may be saved and reused. Hot oatmeal is also delicious when served on halves of canned peaches.

(Your Name and Address)

A.G.A.-640

INDUSTRIAL GAS LESSONS

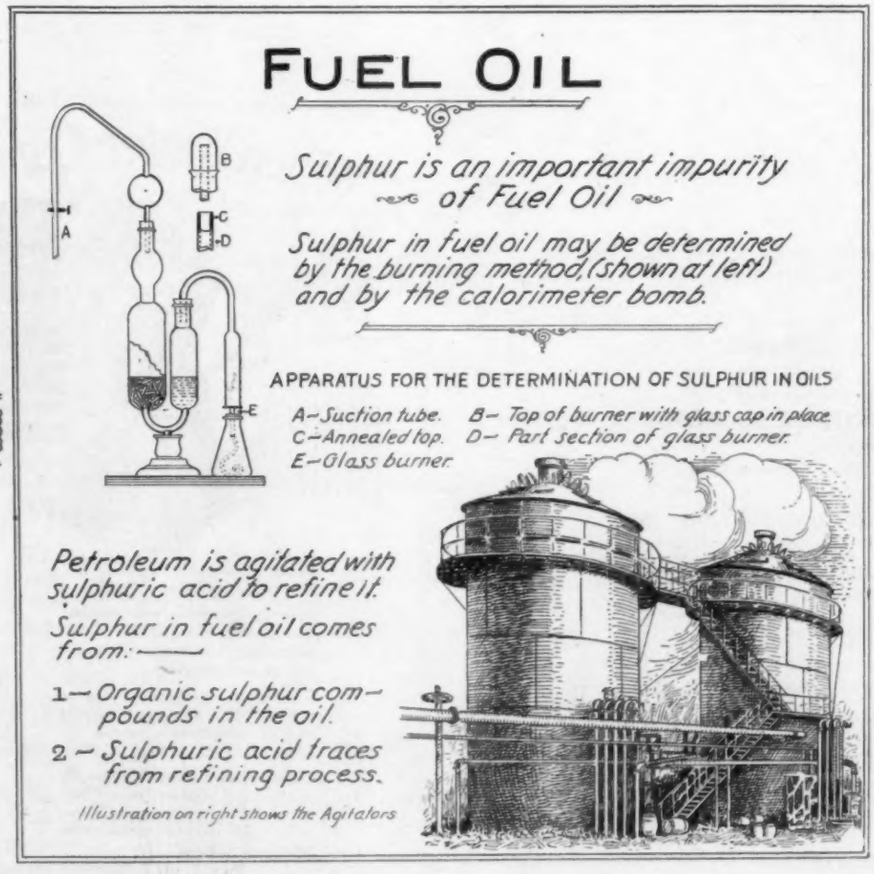
IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

Lesson No. 133

Combustion

Sulphur Content

Another important test which is carried out on fuel oils is the determination of sulphur content of the oil. It is quite understandable that the presence of sulphur in fuel oils is just as objectionable as in coal or in gas. Whether the sulphur is present in the form of elemental sulphur or in combination with organic compounds or finally in the form of inorganic compounds such as hydrogen sulphide, the result on burning is always the same. The sulphur combines with the oxygen in the air and forms a sulphur dioxide. This, of course, liberates heat and from the thermal standpoint alone sulphur is not objectionable. But the corrosive action of sulphur dioxide is very powerful and a furnace in which a fuel oil containing a large amount of sulphur is burned, will be badly corroded by the sulphur dioxide.


FUEL OIL
Sulphur is an important impurity of Fuel Oil
Sulphur in fuel oil may be determined by the burning method, (shown at left) and by the calorimeter bomb.
APPARATUS FOR THE DETERMINATION OF SULPHUR IN OILS
A—Suction tube. B—Top of burner with glass cap in place.
C—Annealed top. D—Part section of glass burner.
E—Glass burner.
A
B
C
D
E
Petroleum is agitated with sulphuric acid to refine it.
Sulphur in fuel oil comes from:—
1—Organic sulphur compounds in the oil.
2—Sulphuric acid traces from refining process.
Illustration on right shows the Agitators

Oils Corrode Pipes

Furthermore, it is found that oils that have high sulphur content will in themselves cause a corrosive

action on pipe lines and tanks where they are stored or through which they are pumped. In general, it is safe to consider that a sulphur content of four per cent is not too high for general purposes, such as steam raising, but for special purposes, that is when the fuel is used in metallurgical furnaces, and in heat treating apparatus, a content of four per cent is altogether inadmissible. The industrial gas engineer should remember this point particularly in connection with the competition that is going on between gas and oil as industrial fuels. The source of the sulphur in the oil may be both natural and artificial. In other words, oils are found containing sulphur compounds of one sort or another, which often gives them a very bad odor. Then again, a certain amount of sulphur may be found in the oils even after neutralization due to the use of sulphuric acid in oil purification.

In the illustration accompanying this lesson is shown an apparatus for determining sulphur and oil. The apparatus consists of an oil lamp and absorption system for absorbing the products of combustion. The oil lamp is seen in this case to be a flask, shown at the right of the illustration. This oil lamp is weighed before and after burning, and the difference in weight gives the amount of oil consumed. The products of combustion are absorbed in a standard solution, sodium bicarbonate, and this solution is titrated with the aid of a standard solution of hypochloride acid. A simple calculation gives the proportion of sulphur present in the original oil.

There are of course other methods for determining sulphur, as for example by means of the calorimetric bomb.

Detailed description of these two methods are found in Leslie's "Motor Fuels."

SALESMANSHIP AND INDUSTRIAL GAS

(Continued from page 168)

and on his attitude toward his customers for he will speak with greater assurance, greater authority, will be listened to more respectfully, and decidedly more consideration will be given his recommendations.

A salesman is liable to take a lot of credit to himself—deservedly or undeservedly. Little harm is done by this for it may tend to give him assurance and courage in dealing with prospects. It is so necessary to develop men with proper assurance and courage that a company cannot afford to neglect these important attributes.

Co-operation with Other Departments Important

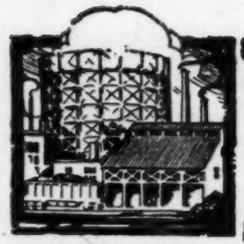
It may be well to state here that the proper functioning of an industrial sales department is dependent partly on the co-operation which it receives from other departments of the gas company—specifically, the collection department, the distribution department, the domestic sales department, and the delivery department.

It is right also to mention that the advertising department is becoming more and more a factor directly influencing the sale of gas for industrial purposes and that the value of a broad-minded and sympathetic advertising policy can hardly be overestimated. Here again is a subject worthy of a separate paper. "Industrial gas advertising, if not wisely directed, can do more harm than good."

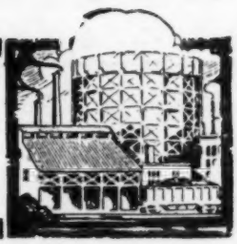
Salesmanship alone, can do less in the development of industrial gas business than in most any other industry, yet, supported by the factors above mentioned its function and scope at once become of such importance that it seems only fair to say that the future of the industry is dependent upon it, that without a progressive industrial sales development the industry will stagnate in the face of increasingly active competition from other fuels whereas with a proper sales policy unswervingly carried out, there is no practical limitation to the amount of business obtainable.

When Winter Comes
GAS SERVICE
Be assured of a clean, abundant and continuous fuel supply.
Make the gas holder your fuel bin. Secure fuel by direct pipeline to your basement. A turn of a valve brings any quantity required.
The desired degree of heat can be regulated by a thermostat, assuring uniform temperature thruout the house.
Expert house heating engineers are ready now to furnish you with full particulars on gas heating. Write, call or phone our Industrial Division, 180 Remsen Street.
Telephone: TRIangle 7500
The Brooklyn Union Gas Company

"Though Spring May Not Be Far Behind," Gas House Heating Will Make Winter Days Comfortable.



NEWS OF THE GAS INDUSTRY



Three-Part Gas Rates Approved by Georgia

The Georgia Public Service Commission, after full hearing, has approved in principle the three-part rate for industrial and certain other large applications for four of the largest gas companies in that State.

The history of these rates should be stated. Under date of May 13, 1924, the Commission by divided vote approved the petition of the Gas Light Company of Augusta for authorization to put in effect on and after July 1, 1924 an optional customer charge, a demand charge, and a consumption charge, to all customers using 50,000 cubic feet or more of gas monthly. In January, 1925 the Macon Gas Company proposed an optional industrial three-part rate, which was accepted for filing and made effective February 1. Early in 1926 the Columbus Electric and Power Company requested, and obtained by divided vote, approval of an optional wholesale industrial "two-part" rate applicable to customers using 20,000 cubic feet or more of gas per month.

When the Georgia Railway and Power Company applied this year for wholesale industrial and water heating gas rates under the three-part system for Atlanta, the Commission issued a rule against the Columbus, Macon and Augusta companies to show cause why the three-part gas rate should not be revised, indicating a contemplated cancellation. The cases were heard together on July 13. The Macon company submitted evidence to show the growth of its industrial business under the rate in question, and also to show that the success of the rate had been so convincing as to indicate the urgent necessity of the use of the three-part rate as the sole rate for all classes of business.

The commission has now approved the optional rates of the Augusta, Macon, and Columbus companies for twelve months from July 13, 1926, and that of the Atlanta company until the further order of the Commission. No opinion was filed.

The Columbus company is required to file monthly a statement showing the names of customers using 20,000 feet or more, the amount of gas used, and the total charges.

In the meantime, the rule is not dismissed, but is being held on the docket of the Commission.

The Atlanta industrial rate is as follows:

Customer charge $3.00 per month; plus

Demand charge of $.70 per month for 100 cubic feet of hourly demand rate; plus

Commodity charge:

For the first 20,000 cubic feet, $1.25 per 1,000; for the next 20,000 cubic feet, $1.15 per 1,000; for the next 20,000 cubic feet, $1.05 per 1,000; for the next 40,000 cubic feet, $.90 per 1,000; for all over 100,000 cubic feet, $.85 per 1,000.

Discount, 10 cents per 1,000 cubic feet for payment within ten days.

Hourly demand charge to be determined by either demand meters or 75 per cent of connected burner capacity, at option of company.

The World's Largest Appliance and Equipment Exhibit

A Great Show Awaits Gas Men At Annual Convention

New York, N. Y.—The Eighth Annual Exhibition of the American Gas Association which will be held in conjunction with the convention at the Million Dollar Pier at Atlantic City, October 11-15, will be the world's largest showing of gas appliances and equipment. On August 16, approximately two months before the convention, more applications for space had been received and filled than there were exhibitors at the convention in 1925.

The leasing of the Million Dollar Pier is responsible for this unprecedented demand for exhibition space. The manufacturer company members of the association wholeheartedly approved this step, as it automatically ended the scramble for space that has been characteristic of the last few conventions of the A. G. A. It also meant that there would be an increase of more than fifty per cent. in the space over that of 1925, making it possible to arrange for larger booths.

Originally, the exhibition committee planned to have 50,000 square feet available for exhibition purposes, but since all of this space was sold on August first it was necessary to arrange for an additional 10,000 square feet. It is felt that this will be ample to provide for the growing number of exhibitors and the ever-increasing demands for space. However, all manufacturers who plan to exhibit should immediately apply for space, as no further increases can be made after this additional space is sold. The pier will be filled to capacity.

A Wonderful Growth

It has been said that the annual exhibition of the American Gas Association has grown faster than that of any other national organization. The following figures show the number of exhibitors and the amount of space sold in previous years:

Year	Exhibitors	Sq. ft. sold
1919	110	8,606
1920	110	10,343
1921	112	9,518
1922	135	19,228
1923	165	24,972
1924	182	28,300
1925	208	33,500

On August 15 the committee had received and filled applications from 212 manufacturers. With almost two months intervening before the convention, it is felt that the 1926 convention exhibition will break

all records made in the past. The committee looks forward to at least 250 exhibitors. In view of the fact that the previous meeting places have been smaller than the Million Dollar Pier, this means the largest and best exhibition ever held.

One of the interesting features of the 1926 exhibition will be the first appearance of the official seal of the Appliance Testing Laboratory at an A. G. A. convention. The work of testing gas tubing, ranges, space heaters, etc., has been progressing at record speed, the tubing tests having been completed, 580 ranges tested, and space heater tests under way since August 1. The industry will have its first opportunity to see what this undertaking means to the future of the gas business.

* * *

Newly-Weds Keep Gas Companies Busy

The number of new homes being established after June weddings, and the increasing interest in household economy, are both reflected in gas company records. A recent analysis of the reports of home-service directors of gas companies from all parts of the country shows the serious thought given by young wives to providing proper food, says the New York State Committee on Public Utility Information.

"Most of the requests for cooking information deal with more inexpensive and nourishing dishes, and receipts for 'real good bread' head the list," says the report. "It is particularly noteworthy that the cheaper dishes are in greatest demand, for it proves how hard the young people are trying to get along on their small incomes. Much of the talk about the frivolity of the younger generation seems foolish in the face of these facts.

"Aside from questions dealing immediately with the preparation and cooking of food, the gas company's home service director is most frequently asked to aid in laying out a family budget."

* * *

Water Gas Plant At Lafayette

Lafayette, La.—The Louisiana Public Utilities Co. have arranged to install a water gas plant at Lafayette, La. This is a town of 13,000 people and we expect an output of 300,000 cu. feet of gas during the heating season.

A. G. A. Industrial Gas Course to Be Given in New York

J. P. Leinroth in Charge of Course

New York, N. Y.—The industrial gas salesman's course which was held last year under the auspices of the Industrial Gas Section of the American Gas Association will be repeated this year, according to official announcement of the A. G. A. The course will be held at the Consolidated Gas Company, 130 East 15th Street, New York, from September 27 to October 9.

Due to the success of the course last year and the growing importance of education for the promotion of gas in industry, the course this year will offer those attending more complete and condensed instruction than has ever before been offered.

This year the economic and sale aspect of the industrial business will be stressed, rather than the technical. It was felt by the committee in charge that the technical phase is well covered by courses such as those conducted at the Massachusetts Institute of Technology and the University of Illinois.

In addition to lectures and discussions, laboratory instruction will be given by capable teachers, and inspection trips will be made to outstanding and interesting industrial installations in the nearby territory.

Subjects to Be Treated

Among the subjects to be treated, with special emphasis always placed on the economic and sales aspect, are:

Industrial heat requirements, types of ovens and furnaces, temperature control, combustion systems, gas and its relation to competitive fuels, low temperature oven application, heat treatment of steel, nonferrous metals, gas-fired steam boilers, plant surveys, elements of salesmanship, and industrial gas salesmanship.

J. P. Leinroth, Public Service Electric and Gas Company, Newark, N. J., as chairman of the subcommittee on education of salesmen, has charge of the course. In commenting on the scope of the course for this year, Mr. Leinroth says, "Last year the industrial school was a positive success, and this year it should be even more so, for the result will be cumulative of the two years. The committee has carefully selected the subjects to be presented, and has been able to secure speakers who will be able to present their topics capably and with authority. The splendid spirit of cooperation shown by those we asked to devote time and energy in the preparation of subjects to be presented by the students, is indeed commendable and is an index that the course will be successful."

Announcement of the speakers and the subjects to be presented by them will be made shortly.

The dates of the school this year were picked so that men from all over the country could attend, at the same time making it possible for them to go to Atlantic City for the Eighth Annual Convention of the American Gas Association, which will be held on the Million Dollar pier October 11-15.

Write Mr. Leinroth immediately and let him know how many men from your company will take advantage of this opportunity to learn officially the latest data on industrial gas promotion. He may be addressed at the Public Service Electric and Gas Company, Newark, N. J.

Space on Million Dollar Pier Going Fast

New York.—The American Gas Association from its headquarters in New York City has advised that Exhibition space of the Million Dollar Pier at Atlantic City is going very fast.

As gas men know, this will be the headquarters of the Convention this year instead of the Steel Pier. It is said that the amount of space that has been sold to date is greatly in excess of any space sold during previous years, which augurs good things for the gas industry at large. The unprecedented demand for Exhibition space is shown by the fact that 700 booths out of a total of 834 have already been sold.

A. G. A. to Aid Exhibitors At Convention

New York.—The Window Display Committee of the Commercial Section of the American Gas Association will be pleased to assist our exhibitors in designing backgrounds for their booths at our Convention in the fall.

Exhibitors desiring to take advantage of this offer should address Mr. S. C. Rieser, Laclede Gas Light Company, St. Louis, Mo., who is Chairman of the Committee.

C. F. Jaques Appointed Sales Manager, Acorn Division, Standard Gas Equipment Corporation

New York.—On July 23, C. F. Jaques was appointed Sales Manager of the Acorn Division in complete charge of gas and electric sales.

Mr. Jaques has been in the stove business for nearly 40 years. Acquaintanceship with stoves began in the development of a stove department for a hardware store on the Pacific Coast. Sixteen years ago he sold Acorn Stoves for the Southern California Agency of what was then Rathbone-Sard Company. Nine years ago he was appointed Pacific Coast Manager. In 1921 he came east and engaged in special work for Rathbone-Sard

C. F. Jaques

Company until July 23, 1926, when he received his present appointment.

Mr. Jaques is thoroughly experienced in the construction and merchandising of stoves. He knows the dealer's problems as well as the Public Utilities'.

* * *

Pennsylvania Engineering Works Announces Organization Changes

New Castle, Pa.—The Board of Directors of the Pennsylvania Engineering Works, New Castle, Penna., announces that Mr. Chas. L. Baldwin has resigned as Secretary and Treasurer to enter another line of business on the Pacific Coast.

Mr. J. K. Furst has been appointed Treasurer. Mr. W. S. Wheeler has been appointed Secretary. Mr. S. B. Cleal has been appointed Assistant Secretary.

* * *

J. S. Palmer, Concord, N. C., Takes Charge of Conewago Plant

Hanover, Pa.—J. S. Palmer, Concord, N. C., has taken charge of the Conewago Gas Company following the resignation of the former manager Edward E. Bair. The Hanover plant, formerly owned by the Howard E. Young interests, and then by the General Gas Service Corporation, was taken over January 16, by the Southern Gas and Power Corporation which controls twenty-two public service companies.

Mr. Palmer has been manager for ten years of the Concord and Kannapolis Gas Company of North Carolina, also owned by the Southern Gas and Power Corporation. He will locate with his family in Hanover.

All of the subsidiaries of the corporation are engaged in the manufacture of gas with the exception of one water company. The company with which Mr. Palmer has been connected supplies two cities seven miles apart with gas.

Mr. Bair, the retiring manager, has been with the Hanover concern for fourteen years.

* * *

Offer to New Haven Gas Company Being Considered

New Haven, Conn.—Directors of the New Haven Gas Light Company are considering an offer for the control of the entire capital stock of the company from the Citizens Public Utilities Commission, Inc., of 149 Broadway, New York City. The New York syndicate is endeavoring to control the gas companies of New Haven county, and if the New Haven stock is acquired, they will make several changes in the operation of the plants, it is understood.

Bonds in the name of the Derby Gas and Electric Corporation, which is owned by the New York syndicate, have been placed on sale. The corporation will own over 99.9 per cent. of the capital stock of the Derby Gas and Electric Company and the entire capital stock, except directors' qualifying shares, of the Wallingford Gas Light Company.

Inasmuch as subsidiaries will have no bonds or preferred stock outstanding, the corporation will in effect own operating properties serving electric light and power and gas to cities of Derby, Shelton and Ansonia, and gas to Wallingford.

The total population served is estimated at 60,000 with 3,600 electric customers and about 11,700 gas customers.

The entire stock of the borough company was acquired last October, and the capital stock of the Derby company was only recently purchased. Offers for the New Haven company have been made on several occasions.

* * *

Conewago Gas Company Plans to Extend Its Mains

Hanover, Pa.—The Conewago Gas Company, a branch of the Southern Gas & Power Company, has announced a program calling for the improvement of the gas mains and service in general, in and about Hanover. These improvements are now underway. The most important, probably, is the extension of a mile or more of main which will, when completed, supply the residents of the New Baltimore district with gas. More extension pipe is to be laid on the extended parts of York and Baltimore streets as soon as the necessary assurance of consumers is received by the office.

Plans for the better service program also include an effort to secure uniform gas pressure during noon hour when the drain on the pipes is the greatest. Previous to this time, residents of the northern portion of Hanover found that during the noon hour the pressure was extremely low at times due to the heavy usage. The company has employed a large force of laborers to carry on the work.

A Short History of Gas in Denver, Colo.

Denver, Colo.—Colorado was admitted to the Union August 1, 1876, and during August 1-3 of 1926 she took three days to celebrate her fiftieth anniversary. During the festive season all the pioneers have stories to tell, facts to recite. It was from the columns of the Rocky Mountain News, the oldest newspaper in Colorado, the following story of gas was obtained:

"More than half a century ago, in 1867, the Kansas Pacific railroad sent Col. James Archer of St. Louis to Denver for the purpose of inducing the latter town to bond itself for $200,000 to bring the railroad west. Failing in this mission, Colonel Archer remained here and on Nov. 15, 1867, obtained a franchise to supply gas to the people and street lighting to the municipality of Denver. This was the beginning of the Denver gas company and the origin of what is now the Public Service Company of Colorado, a utility serving more than two-thirds of the population of the state over three-fourths of its area.

"Col. James Archer obtained a charter from the Colorado territorial government on Jan. 1, 1870, and his company was the first to operate in the territory. Others had previously been granted charters, among them the Denver Manufacturing and Milling Company, in 1864, and the Occidental Gas and Light Company, in 1867.

"Early regulation of the rates of the utility by state and territorial authority is found in a law existing at the time the Denver Gas Company received its charter. This law prohibited the company from charging in excess of $6 per 1,000 cubic feet of gas, while the franchise agreement for lighting the city fixed a price of $55 per year for each gas street lamp. The company was required to commence actual operation immediately after the charter had been granted and have a mile of pipe laid along a designated route by Jan. 1, 1870.

"Organizations of new companies, consolidations and mergers were numerous and rapid in the period following 1883. In the latter year, the United Gas Improvement Company obtained a franchise from the city of Denver, but no plant was constructed. Four years later, on April 11, 1887, the city granted franchise rights to the People's Gas Light Company, which offered to supply the city at the rate of $1.50 per 1,000 cubic feet of gas. In 1891, the People's Gas Light Company was consolidated with the Denver Gas Company, and the new organization called the Denver Consolidated Gas Company. This company continued to operate until 1899, when it was merged with the Denver Consolidated Electric Company under the name of the Denver Gas and Electric Company."

Today it is being operated under the name of the Public Service Company of Colorado.

* * *

Derby Gas Financing Begins.

Derby, Conn.—As a sequel to the announced plans by interests identified with Utilities Power & Light corporation for the formation of the Derby Gas & Electric corporation, and the acquisition by the latter company of over 99.9 per cent of the capital stock of the Derby Gas & Electric company and the entire capital stock of the Wallingford Gas Light company, both in Connecticut, offering is being made of a new issue of $5,500,000 Derby Gas & Electric corporation 5 per cent first lien gold bonds, service of 1946. The offering group is headed by the Chase Securities Corporation and includes Pynchon & Co., West & Co., W. S. Hammons & Co. and John Hickerson & Co. The bonds are dated Aug. 1, 1926, and are priced at 95 and accrued interest, to yield over 5.40 per cent.

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Robert MacSaveny Jr., Brooklyn Union Gas Co., Dies

Brooklyn, N. Y.—Robert MacSaveny Jr., veteran employee of the Brooklyn Union Gas Company and general foreman of the Williamsburg branch, recently died. He had been employed by the gas company for 22 years.

He is survived by his widow, Mrs. Catherine MacSaveny; four sons, Robert, Everett, Clement and Vincent; his parents, Mr. and Mrs. Robert MacSaveny; two brothers, William MacSaveny and Howard MacSaveny; six sisters, Elizabeth, Ellen, Mary, Hannah, Jeannette and Evelyn.

Ohio Gas Light and Coke Company Sold to Holding Company

Wauseon, O.—The controlling interest in The Ohio Gas, Light and Coke Company has been purchased by The Great Lakes Utilities Company, a holding company operated by Sanderson and Porter, who have offices in New York City, Chicago and San Francisco.

Mr. Cecil F. Elmes is manager of the Chicago office of Sanderson and Porter and president of The Great Lakes Utilities Company. Sanderson and Porter are widely known public utility operators, owning and operating gas plants, electric light plants and street car lines in twenty-two states, valued at more than $335,000,000 and having more than $61,000,000 of gross earnings.

The holdings of Sloan and Orwig have been sold to the new owners, and the new organization perfected as follows:

President, Cecil F. Elmes; vice-president and general manager, R. W. Frost; secretary and treasurer, E. A. Golden; assistant treasurer, T. P. Mullen.

General Manager R. W. Frost will have his headquarters at Napoleon and will have full charge of the operations.

The new interests intend to complete the new plant and expect to make large additions and extensions to the property. Increased holder capacity is contemplated by October first, insuring a uniform supply to all towns served. Additional purifying apparatus is to be installed by September fifteenth, so that all bad odors will be eliminated.

The new plant is now turning out the finest grade of coke to be found on the market today.

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Bids Being Asked On New Gas Plant For Winter Haven

Winter Haven, Fla.—McGrath and Muller, public utilities firm, is receiving bids for equipment for the new plant here, and contracts soon will be let, according to word to the chamber of commerce gas plant committee from New York.

A franchise was given recently and representatives of the company will be here this month to begin preliminary work. The new gas system is to be in operation this winter with a daily capacity of 10,000 cubic feet.

Connecticut Building at Sesqui to Be Heated by Gas

Hartford, Conn.—Connecticut's state building, which was dedicated last month in the presence of the New Haven Grays, the Governor's Foot Guard and other Connecticut military organizations, at the Sesquicentennial International exposition at Philadelphia, is completely equipped for gas heating, according to the Connecticut committee on public service information. in fact, practically all of the exposition buildings are equipped with gas for use in heating the rooms on cool days and in cooking and water heating.

Since the Sesquicentennial exposition is to continue until the close of the year, many of the buildings will be heated by gas during the late fall months. During the cool months of the spring, exposition offices which were functioning prior to the official opening on June 14 were heated by gas. Whenever hot water is needed on the exposition grounds it is heated by gas. The huge athletic stadium, which will remain as a permanent memorial of the Sesquicentennial celebration, is equipped with all modern conveniences for heating shower bath water by gas.

Gas for the Connecticut building is furnished direct from the major gas main which runs under Broad street through the middle of the exposition grounds. With the work of laying gas pipes through the park unfinished at the end of May, 31,934 feet of gas mains had been laid. It is estimated that between 40,000 and 50,000 feet of mains will be necessary before all of the buildings are completely equipped with gas.

Indiana Utility Plans $12,500,000 Bond Issue

New York City.—A petition for authority to issue $12,500,000 for forty-year first and refunding mortgage gold bonds of the Northern Indiana Public Service Company has been filed by the company with the Indiana Public Service Commission. A petition was also filed asking authority to issue $4,000,000 of the first lien and refunding mortgage gold bonds, 6 per cent series, of the Northern Indiana Gas and Electric Company, which was recently merged into the Northern Indiana Public Service Company.

The latter company intends to sell the $12,500,000 issue at not less than 85 per cent of the par value, to yield $10,625,000. The bonds will bear interest at not more than 5 per cent. As a result of this proposed new financing, the Public Service Company will retire $4,500,000 of three-year notes, due June 1, 1927, thus releasing $5,000,000 of Northern Indiana Gas and Electric first lien and refunding mortgage gold bonds, pledged as security. The old $5,000,000 issue and the new $4,500,000 issue will both be pledged as collateral security under the company's first and refunding mortgage.

The money raised by the sale of the proposed bond issue will be employed to reimburse the company's treasury for capital expenditures already made and to provide funds for budget expenditures for the year 1926 and part of 1927.

Worcester Gas & Electric Companies Combine

Worcester, Mass.—By unanimous votes of the stockholders of the Worcester Gas Light Company and the Worcester Electric Light Company, the consolidation of the two public utility properties was approved. The merger plan will now be placed before the Public Utilities Commission for a hearing late in August and providing this body's authorization is received will immediately become operative. The stockholders of the Worcester Gas Light Company voted 66,204 shares of the outstanding 82,000 shares of the common stock and 27,320 shares out of 35,000 shares of outstanding preferred stock in favor of the plan. The merger plan provides for the exchange of the Worcester Gas Light Co. stock on the basis of 2½ shares of gas company stock for one share of electric light company stock. The preferred shares and the bonds of the Worcester Gas Light Company will be called and paid for in cash if the plan is approved.

Authority has been given the presidents and treasurers of both companies to sign all papers and take all steps necessary to the consummation of the consolidation. These officers were also authorized to petition the Public Utilities Commission for its approval of the merger.

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Rochester Gas Company Granted Right to Increase Capital

Rochester, N. Y.—Authorization of the issuance of $3,680,000 in preferred stock early this fall by the Rochester Gas and Electric Corporation, following the consent of the Public Service Commission to the issue, has been announced. The directors of the company authorized dividends amounting to $241,840 on the 7 per cent. stock of series B, C and D. All stockholders of record August 14 will participate in these dividends, which are payable September 1. Of the total, $70,000 is payable in series B; $39,727.50 in series C, and $133,112 in series D. Funds from the new stock sales, according to J. C. Collins, treasurer of the company, are not intended to cover large power projects in the Genesee River Valley or elsewhere, but are to be used chiefly for laying gas main cables, additions and improvements. The date of issue of the new stock will be fixed as soon as final approval by the Public Service Commission is given.

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Eagle Oil and Supply Co. Boston Distributor for Quigley

New York.—Eagle Oil and Supply Co., of Boston have been appointed distributors for Quigley Furnace Specialties Co., Inc., of New York, covering Eastern Massachusetts and Rhode Island, for all Quigley Products including, Hytempite, Acid-Proof Cement, Quigley Refractory Gun, and Triple-A Protective Solutions, Etc., which will be carried in stock.

O. L. Bradshaw Named Manager of Gas Company

Durham, N. C.—The Carolina Power and Light Company announced the appointment of O. L. Bradshaw as manager of their local office to succeed J. F. Knowlen, deceased.

Mr. Bradshaw enters on his new duties in Durham as manager, coming here from Roxboro. He has been in the employ of the Carolina Power and Light Company for four years, starting in as salesman in 1922, and afterwards working himself up to the position of local manager. When the Carolina Company extended service to the town of Roxboro in January of last year, Mr. Bradshaw was sent there as manager. While in Roxboro he took an active interest in Rotary work and other civic affairs and during his stay there made many friends, who will regret to learn of his transfer, but who will at the same time be pleased to learn of his well-deserved advancement.

Mr. Bradshaw is a Carolinian, being a native of Lenoir, this state. He is a graduate of State college, of Raleigh, graduating with the class of 1922. On finishing college he secured employment with the Carolina company and his appointment as manager of the local office is in recognition of the service rendered the customers of this utility while acting in such capacity.

In an interview with him today, he said, "I feel that it is our duty as public servants, to really serve, and in order to really serve we should make ourselves useful. We ought not to stick our toes in at the edge of the pond and feel around it, but instead take off our hats and coats and dive off the dock, and do it right. Gas service not only differs from other commodities, such as potatoes, clothes or shoes, but it also differs from every other service supplied to the public because the standard demanded by the public for individual, instantaneous gas service is the most exacting known. In my work in Durham I hope it may be possible for us to give gas service second to none and will devote my full time and energy in this direction. Moreover, I would like to add that I want every one of our customers to feel free to call upon me at any time."

Georgia Co. Exhibits Industrial Appliances

Atlanta, Ga.—One of the most interesting exhibits of the Atlanta Industrial Exposition, held at the auditorium here in connection with "Merchants and Manufacturers Week," August 2 to 7, was that arranged by the Georgia Railway and Power Company, showing industrial appliances for the use of gas.

Among the appliances shown were different types of gas burners for industrial use, a pyrometer, a gas forge or rivet heater, and a gas heated immersion tank. All of the appliances shown were displayed in actual operation, and the exhibit was one of the outstanding ones at the show, which held more than 90 exhibits and demonstrated more than 20 different lines of industry within a radius of 75 miles of Atlanta.

For the past several years the Georgia Railway and Power Company has been conducting a steady campaign for the increased use of gas as a fuel in industrial plants, and the exhibit formed an important step in this campaign.

Gas Company Adds Line of Appliances

Eaton, O.—For the convenience of its patrons and users of natural gas, the Western Ohio Public Service Co., successor to the Jantha Light and Fuel Co., is installing in its new quarters in the Eaton Telephone Co. building, a line of gas ranges and appliances. The line embraces only the most modern and approved type of both ranges and appliances, which, by long testing and experiment, have proven to be gas savers although giving the maximum of service. In this connection the company will specialize in sale of the reputed Detroit Jewel range. For the purpose of giving its new service department an auspicious opening, the company will for one week, Aug. 27, conduct a special sale of the Detroit Jewel range at special low prices. Terms will be available during the sale and only during that period. Premiums also will be given.

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Penna. G. & E. to Build Holder

York, Pa.—The Pennsylvania Gas and Electric Company has let contracts for the building of a new storage holder, which will have a capacity for storing 2,000,000 cubic feet of gas. This improvement was announced by Mark Pendleton, vice-president of the company, when he addressed the noon-day luncheon of the York Rotary Club at the Yorktowne Hotel. The new holder will give the local gas plant storage capacity of 3,000,000 cubic feet of gas, or approximately forty-eight hours reserve for present requirements of territory supplied.

Radiantlog Corporation Appoints Pacific Coast Representative

The Radiantlog Corp., of New York, manufacturers of "Radiantlog" room heaters has appointed as their Pacific Coast representative the T. G. Arrowsmith Co., 661 Howard street, San Francisco, Calif. Mr. Arrowsmith is well known to gas executives all over the country, and is handling a number of types of gas burning appliances for Eastern manufacturers on the Pactific Coast.

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The Gas Company Girls Cannot Be Outdone

Denver, Col.—Man, poor man, makes the gas ranges, but it takes the ladies to show the value of the finished product. Yes indeed, and when the Public Service Company of Colorado schooled its male employees as one of the best first aid corps in the country, what did the girls do?

They organized a first aid of their own and on August 6 with the visiting firemen's association present, one of the girls was supposed to have fallen and dislocated her hip and broke her collar bone. Within five minutes a stretcher was made and the "unfortunate" was bandaged for comfortable travel.

Can the men beat that?

Of course not, and while the signs in the elevators read: "You need not take off your hat when lady passengers enter," you just got to take off your hat to the ladies of the Public Service Company of Colorado.